

Application No. 10/669,502

Docket No.: 2901683.13

AMENDMENTS TO THE CLAIMS

1. (currently amended) A composite laminated sandwich panel which has two external faces, comprising:

N metal sheet layers comprising an aluminum non-heat treatable Al-Mg alloy having a magnesium content of from ~~about~~ 4% to ~~about~~ 6% based on the weight of alloy, said N metal sheet layers being the same or different, and

N-1 polymer layers alternating in said sandwich panel with at least one of said metal sheet layers, wherein N is equal to at least 2, and each of said polymer layers comprises glass fibers.

2. (Original) A composite laminated sandwich panel according to claim 1, wherein N is at least 3.

3. (currently amended) A composite laminated sandwich panel according to claim 1, wherein at least one of the two external faces of said composite laminated sandwich panel ~~includes two external faces, at least one of which~~ comprises an aluminum non-heat treatable alloy sheet, ~~and further wherein said faces may optionally comprise two of said metal sheet layers.~~

4. (original) A composite laminated sandwich panel according to claim 1, wherein said aluminum non-heat treatable Al-Mg alloy is selected from the group consisting of 5082, 5083, 5182, 5086, 5383, 5456, and 5186 alloys.

5. (currently amended) A composite laminated sandwich panel according claim 1, wherein at least one of said Al-Mg alloy sheets comprises a 5182 or 5186 alloy in the H111 or H24 temper, and the thickness of said at least one Al-Mg alloy sheet is between 0.2 and 0.4 mm.

6. (previously presented) A composite laminated sandwich panel according to claim 1, wherein the manganese content of the Al-Mg alloy is between 0.2 and 1% based on the weight of the alloy.

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7. (previously presented) A composite laminated sandwich panel according to claim 6, wherein the scandium content of the Al-Mg alloy is between 0.1 and 0.3% and/or the hafnium content thereof is between 0.2 and 0.4%, all based on the weight of the alloy.
8. (Original) A composite laminated sandwich panel according to claim 1, wherein the Al-Mg alloy further comprises at least one element forming dispersoids, said element being selected the group consisting of Zr, Cr, La, Ti, Ce, Nd, Eu, Gd, Tb, Dy, Ho, Er, Y and Yb.
9. (Original) A composite laminated sandwich panel according to claim 2, wherein the Al-Mg alloy further comprises at least one element forming dispersoids, said element being selected the group consisting of Zr, Cr, La, Ti, Ce, Nd, Eu, Gd, Tb, Dy, Ho, Er, Y and Yb.
10. (Original) A composite laminated sandwich panel according to claim 3, wherein the Al-Mg alloy further comprises at least one element forming dispersoids, said element being selected the group consisting of Zr, Cr, La, Ti, Ce, Nd, Eu, Gd, Tb, Dy, Ho, Er, Y and Yb.
11. (previously presented) A composite laminated sandwich panel according to claim 4, wherein the Al-Mg alloy in at least one sheet further comprises at least one element forming dispersoids, said element being selected the group consisting of Zr, Cr, La, Ti, Ce, Nd, Eu, Gd, Tb, Dy, Ho, Er, Y and Yb.
12. (Original) A composite laminated sandwich panel according to claim 5, wherein the Al-Mg alloy further comprises at least one element forming dispersoids, said element being selected the group consisting of Zr, Cr, La, Ti, Ce, Nd, Eu, Gd, Tb, Dy, Ho, Er, Y and Yb.
13. (Original) A composite laminated sandwich panel according to claim 6, wherein the Al-Mg alloy further comprises at least one element forming dispersoids, said element being selected the group consisting of Zr, Cr, La, Ti, Ce, Nd, Eu, Gd, Tb, Dy, Ho, Er, Y and Yb.
14. (Original) A composite laminated sandwich panel according to claim 7, wherein the Al-Mg alloy further comprises at least one element forming dispersoids, said element being selected the group consisting of Zr, Cr, La, Ti, Ce, Nd, Eu, Gd, Tb, Dy, Ho, Er, Y and Yb.

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15. (previously presented) A composite laminated sandwich panel according to claim 1, wherein at least one of said metal sheets has a tensile yield strength of at least about 240 MPa, and an ultimate tensile strength of at least about 260 MPa.
16. (Original) A composite laminated sandwich panel according to claim 15, wherein said tensile yield strength is at least 260 MPa and an ultimate tensile strength of at least about 275 MPa.
17. (previously presented) A composite laminated sandwich panel according to claim 7, wherein at least one of said metal sheets has a tensile yield strength of at least about 300 MPa.
18. (previously presented) A composite laminated sandwich panel according to claim 7, wherein at least one of said metal sheets has a tensile yield strength of at least about 330 MPa.
19. (previously presented) A composite laminated sandwich panel according to claim 15, wherein at least one of said metal sheets has an apparent stress intensity factor equal to K_{Ic} , measured according to the ASTM E 561 standard on a 400 mm wide panel with an initial crack of 133 mm, equal to at least about $75 \text{ MPa}\sqrt{\text{m}}$,
20. (Original) A panel according to claim 19 wherein the apparent stress intensity factor is at least $80 \text{ MPa}\sqrt{\text{m}}$.
21. (Original) A panel according to claim 19, wherein the apparent stress intensity factor is at least about $85 \text{ MPa}\sqrt{\text{m}}$.
22. (Original) A structural element comprising a composite laminated sandwich panel according to claim 1.
23. (Original) A structural element comprising a composite laminated sandwich panel according to claim 2.
24. (Original) A structural element comprising a composite laminated sandwich panel according to claim 3.

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25. (Original) A structural element comprising a composite laminated sandwich panel according to claim 4.
26. (Original) A structural element comprising a composite laminated sandwich panel according to claim 5.
27. (Original) A structural element comprising a composite laminated sandwich panel according to claim 6.
28. (Original) A structural element comprising a composite laminated sandwich panel according to claim 7.
29. (Original) A structural element comprising a composite laminated sandwich panel according to claim 8.
30. (Original) A structural element comprising a composite laminated sandwich panel according to claim 9.
31. (Original) A structural element comprising a composite laminated sandwich panel according to claim 10.
32. (Original) A structural element comprising a composite laminated sandwich panel according to claim 11.
33. (Original) A structural element comprising a composite laminated sandwich panel according to claim 12.
34. (Original) A structural element comprising a composite laminated sandwich panel according to claim 13.
35. (Original) A structural element comprising a composite laminated sandwich panel according to claim 14.
36. (Original) A structural element comprising a composite laminated sandwich panel according to claim 15.

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37. (Original) A structural element comprising a composite laminated sandwich panel according to claim 16.
38. (Original) A structural element comprising a composite laminated sandwich panel according to claim 17.
39. (Original) A structural element comprising a composite laminated sandwich panel according to claim 18.
40. (Original) A structural element comprising a composite laminated sandwich panel according to claim 19.
41. (Original) A structural element comprising a composite laminated sandwich panel according to claim 20.
42. (Original) A structural element comprising a composite laminated sandwich panel according to claim 21.
43. (previously presented) A structural element as claimed in claim 22, wherein said structural element is suitable for use in aeronautical construction.
44. (previously presented) A structural element as claimed in claim 23, wherein said structural element is suitable for use in aeronautical construction.
45. (previously presented) A structural element as claimed in claim 24, wherein said structural element is suitable for use in aeronautical construction.
46. (previously presented) A structural element as claimed in claim 25, wherein said structural element is suitable for use in aeronautical construction.
47. (previously presented) A structural element as claimed in claim 26, wherein said structural element is suitable for use in aeronautical construction.
48. (previously presented) A structural element as claimed in claim 27, wherein said structural element is suitable for use in aeronautical construction.

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49. (previously presented) A structural element as claimed in claim 28, wherein said structural element is suitable for use in aeronautical construction.
50. (previously presented) A structural element as claimed in claim 29, wherein said structural element is suitable for use in aeronautical construction.
51. (previously presented) A structural element as claimed in claim 30, wherein said structural element is suitable for use in aeronautical construction.
52. (previously presented) A structural element as claimed in claim 31, wherein said structural element is suitable for use in aeronautical construction.
53. (previously presented) A structural element as claimed in claim 32, wherein said structural element is suitable for use in aeronautical construction.
54. (previously presented) A structural element as claimed in claim 33, wherein said structural element is suitable for use in aeronautical construction.
55. (previously presented) A structural element as claimed in claim 34, wherein said structural element is suitable for use in aeronautical construction.
56. (previously presented) A structural element as claimed in claim 35, wherein said structural element is suitable for use in aeronautical construction.
57. (previously presented) A structural element as claimed in claim 36, wherein said structural element is suitable for use in aeronautical construction.
58. (previously presented) A structural element as claimed in claim 37, wherein said structural element is suitable for use in aeronautical construction.
59. (previously presented) A structural element as claimed in claim 38, wherein said structural element is suitable for use in aeronautical construction.
60. (previously presented) A structural element as claimed in claim 39, wherein said structural element is suitable for use in aeronautical construction.

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61. (previously presented) A structural element as claimed in claim 40, wherein said structural element is suitable for use in aeronautical construction.

62. (previously presented) A structural element as claimed in claim 41, wherein said structural element is suitable for use in aeronautical construction.

63. (previously presented) A structural element as claimed in claim 42, wherein said structural element is suitable for use in aeronautical construction.

64. (Original) An aircraft fuselage component comprising a composite laminate sandwich panel according to claim 1.

65. (Original) An aircraft door component comprising at least one composite laminate sandwich panel according to claim 1.

66-79. (cancelled)

80. (previously presented) A composite laminated sandwich panel according to claim 8, wherein the total concentration of said dispersoids in said alloy does not exceed about 2% based on the weight of the alloy and the concentration of each individual dispersoid element does not exceed about 0.5%.